AMENDMENTS TO THE SPECIFICATION

IN THE SPECIFICATION:

Please amend the specification as follows. Insertions appear as underlined text (e.g., <u>insertions</u>) while deletions appear as strikethrough text (e.g., ~~strikethrough~~).

Please amend the paragraph beginning on page 11 at line 4 as follows:

Rather than selecting three specific locations for $E(\overline{R})$, it is known that the accuracy of the solution is often improved by integrating known values of $E(\overline{R})$ using a weighting function over the region of integration. For example, assuming that $E(\overline{R})$ is known along the surface of the wire 100, then choosing three weighting functions ~~g1(ℓ), g2(ℓ), and g2(ℓ)~~ <u>g1(ℓ), g2(ℓ), and g3(ℓ)</u>, the desired three equations in three unknowns can be written as follows (by multiplying both sides of the equation by $g_i(\ell)$ and integrating):

$$\int E(\ell')g_1(\ell')d\ell' = I_1\iint f_1(\ell)g_1(\ell')G(\ell,\ell')d\ell d\ell' + I_2\iint f_2(\ell)g_1(\ell')G(\ell,\ell')d\ell d\ell' + I_3\iint f_3(\ell)g_1(\ell')G(\ell,\ell')d\ell d\ell'$$

$$\int E(\ell')g_2(\ell')d\ell' = I_1\iint f_1(\ell)g_2(\ell')G(\ell,\ell')d\ell d\ell' + I_2\iint f_2(\ell)g_2(\ell')G(\ell,\ell')d\ell d\ell' + I_3\iint f_3(\ell)g_2(\ell')G(\ell,\ell')d\ell d\ell'$$

$$\int E(\ell')g_3(\ell')d\ell' = I_1\iint f_1(\ell)g_3(\ell')G(\ell,\ell')d\ell d\ell' + I_2\iint f_2(\ell)g_3(\ell')G(\ell,\ell')d\ell d\ell' + I_3\iint f_3(\ell)g_3(\ell')G(\ell,\ell')d\ell d\ell'$$

Note that the above double-integral equations reduce to the single-integral forms if the weighting functions $g_i(\ell)$ are replaced with delta functions.

Please amend the paragraph beginning on page 12 at line 1 as follows:

where

$$V_i = \int E(\ell')g_i(\ell')d\ell'$$

and

$$\cancel{Z_{ij} = \iint f_j(\ell)g_i(\ell')G(\ell,\ell')d\ell d\ell}$$

$$\underline{Z_{ij} = \int\int f_j(\ell) g_i(\ell') G(\ell,\ell') d\ell d\ell'}$$

Please amend the paragraph beginning on page 12 at line 5 as follows:

Solving the matrix equation yields the values of I_1, I_2, and I_3. The values I_1, I_2, and I_3 can then be inserted into the equation $\cancel{I(\ell) \approx I_1 f(\ell) + I_2 f_2(\ell) + I_3 f_3(\ell)}$ $\underline{I(\ell) \approx I_1 f_1(\ell) + I_2 f_2(\ell) + I_3 f_3(\ell)}$ to give an approximation for $I(\lambda)$. If the basis functions are triangular functions as shown in Figure 1B, then the resulting approximation for $I(\lambda)$ is a piecewise linear approximation as shown in Figure 1C. The I_i are the unknowns and the V_i are the conditions (typically, the V_i are knowns). Often there are the same number of conditions as unknowns. In other cases, there are more conditions than unknowns or less conditions than unknown.